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DK Seminar

Nov 23, 2016, 14:15 - 15:00
University of Vienna,
Oskar-Morgenstern-Platz 1, HS 2.

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Scalar conservation laws with heterogeneous flux in the BV framework

We consider a scalar conservation law with a flux containing spatial heterogeneities of bounded variation, where the number of discontinuities may be infinite. We address the question of existence of an adapted entropy solution in the BV framework. A sufficient key condition guaranteeing existence is identified and new BV estimates are given. This provides the most general BV theory available. Moreover, we show with a counter-example that if this hypothesis is violated, the problem may be ill-posed in the BV framework.